## REMARKS

Claims 21-24, 57 and 58 are pending in the application and stand rejected. Reconsideration of the present invention is respectfully solicited.

Claims 21, 23, 24 and 58 were rejected under 35 U.S.C. 102(b) as being anticipated by Gruffaz et al. (U.S. Patent 4,275,228). Claim 22 was rejected under 35 U.S.C. 103(a) as being unpatentable over Gruffaz et al. (U.S. Patent 4,275,228) in view of Drent (GB 2,238,539). Applicants respectfully traverse these rejections.

Gruffaz et al. describe a process for the preparation of ethyl acetate by reacting ethylene with acetic acid in the presence of a solid, ion-exchange fluoropolymer which comprises pendant sulfonic acid groups (see col. 2, lines 3-7). The fluoropolymer catalyst contains pendant sulfonic acid groups in an amount of from about 0.01 to 6 milliequivalents per gram of catalyst (see col. 3, lines 6-9). The catalysts are polymers of perfluoroalkenylsulfonic acids or co-polymers comprising these acids and fluoroethylenes, such as tetrafluoroethylene (see col. 3, lines 12-16), and polymers marketed under the trademark NAFION are disclosed as a particularly advantageous class of polymers (see col. 3, lines 32-58). A preferred method of carrying out the process comprises mixing the solid catalyst with an inert material such as quartz or silica (see col. 4, lines 23-25).

Drent describes the preparation of alcohols from olefins by reacting an olefin with a perfluorinated carboxylic acid in the presence of a very strong acid catalyst and reacting the resulting ester with water to afford the alcohol and perfluorinated carboxylic acid. A preferred olefin is cyclohexene and a preferred very strong acid is perfluorinated sulfonic acid.

The Examiner maintains that the difference between Gruffaz et al. and the claimed invention is that the instant claim requires that the olefin is cyclohexene and that since Drent teaches esterification of cyclic olefin it is well within the level of one having ordinary skill in the art, at the time the invention was made, to esterify a cyclic compound such as cyclohexene with carboxylic acid in the presence of a catalyst disclosed by Gruffaz et al. with the expectation of increasing the yield of cyclohexyl acetate.

Applicants maintain that the catalyst of Gruffaz et al. and the present microcomposite differ in many significant aspects.

Applicants maintain that Gruffaz et al. merely admixes a fluoropolymer, such a NAFION, which is in a particulate form with a particulate inert material such as silica or quartz. This does not result in a catalytic porous microcomposite comprising a perfluorinated ion-exchange polymer with pendant sulfonic acid/or carboxylic acid groups entrapped within and highly dispersed throughout a network of metal oxide. What does result in Gruffaz et al. is a crude mix of polymer particles and separate inert material particles.

In order to obtain Applicants' microcomposite, the perfluorinated ion-exchange polymer is mixed with one or more metal oxide precursors in a common solvent. Gelation is initiated and the solvent removed. This results in a porous microcomposite wherein the perfluorinated ion-exchange polymer is entrapped within and highly dispersed throughout a network of a metal oxide. Each particulate of the final microcomposite comprises both the perfluorinated ion-exchange polymer and the metal oxide wherein the perfluorinated ion-exchange polymer is entrapped within and highly dispersed throughout the network of metal oxide.

The present microcomposite further possesses pores having a diameter ranging from 0.5 nm to about 75 nm and may further comprise pores having a diameter ranging from about 75 nm to about 1000 nm. Although Gruffaz et al. mentions a mean pore diameter of 80Å for a certain silica inert material commercially available as SPHEROSIL XOA 400, there is no disclosure in Gruffaz et al. of pore size for an integral perfluorinated ion exchange polymer/metal oxide catalyst wherein the polymer is entrapped within and highly dispersed throughout the network of metal oxide. Applicants' small pore size within a microcomposite wherein the perfluorinated ion exchange polymer is highly dispersed throughout a network of metal oxide leads to a high surface area catalyst which enables high catalytic activity from readily accessible active sites. The inert particles of Gruffaz et al. do not make the pure polymer catalyst particles more accessible but merely provide a bulk support for the catalyst in the reactor.

In view of the above, Applicants maintain that Gruffaz et al. does not teach or suggest to one of ordinary skill in the art Claims 21, 23, 24 and 58, and that the combination of Gruffaz et al. with Drent does not suggest Claim 22.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

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